DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 82.28

WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-017294
Date Inspected: 04-Oct-2010

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Westmont Industries

OSM Arrival Time: 700
OSM Departure Time: 1530
Location: Santa Fe Springs, CA.

CWI Name:	R. Rodriguez, R. Dominguez	**CWI Present:**	☑ Yes ☐ No
Inspected CWI report:	☐ Yes ☑ No ☐ N/A	**Rod Oven in Use:**	☐ Yes ☐ No ☑ N/A
Electrode to specification:	☑ Yes ☐ No ☐ N/A	**Weld Procedures Followed:**	☑ Yes ☐ No ☐ N/A
Qualified Welders:	☑ Yes ☐ No ☐ N/A	**Verified Joint Fit-up:**	☑ Yes ☐ No ☐ N/A
Approved Drawings:	☑ Yes ☐ No ☐ N/A	**Approved WPS:**	☑ Yes ☐ No ☐ N/A
		Delayed / Cancelled:	☐ Yes ☑ No ☐ N/A

Bridge No: 34-0006
Component: Travelers

Summary of Items Observed:

The Quality Assurance Inspector Sean Vance arrived on site at Westmont Industries (WMI) in Santa Fe Springs, CA, to randomly observe the in process welding of the Travelers. The QA Inspector arrived on site to randomly observe the WMI Quality Control (QC) Inspectors in process and completed visual and nondestructive testing. Upon the arrival of the QA Inspector the following observations were made:

Traveler Test Rack

On this date, the QA Inspector observed Westmont Industries (WMI) production personnel Mr. Tim Hartnett, cutting material which will be utilized, for the Traveler Test Rack. The QA Inspector observed that Mr. Hartnett was continuing to utilize a Marvel® 15 A series horizontal band saw, to perform the cutting operations and observed that the material being cut, is identified as 8” x 4” x .1875” (203 mm x 102 mm x 5 mm) rectangular Tube Steel (TS). The QA Inspector spoke with Mr. Hartnett and he explained that WMI shop supervisor, Mr. George Grayum, had provided a list of TS material, with specific dimensions, per the shop drawing bill of materials.

Mr. Harnett further explained that he was cutting the material to these specific lengths and marking the material with a white paint stick marker, to identify the individual cut pieces of material. After the material was cut and marked, the QA Inspector observed Mr. Hartnett utilize the overhead bay crane, chain and hook to lift and place the material into neatly stacked piles, nearby the cutting area. The QA Inspector noted that the Mill Test Reports (MTR’s) had been previously provided and the QA Inspector had previously written “OK to Cut” on the material.

On this date, the QA Inspector observed Westmont Industries (WMI), production welder Daniel Grayum (WID # 3049) continuing to perform Flux Core Arc Welding (FCAW) activities, for the Traveler Test Rack. The QA

Inspector observed that Mr. Grayum was utilizing a Miller brand machine and wire feeder, to perform the FCAW and that Ultracore 71A85 (.045") diameter wire was being utilized, for the filler metal. The QA Inspector observed that the above mentioned FCAW was being performed on the vertical column base assembly Tube Steel (TS), Wide Flange Beam (WFB) and Plate material.

Trolley Test Stand

On this date, the QA Inspector observed Westmont Industries (WMI), production welder Jose Rodriguez (WID # 3031) performing Gas Metal Arc Welding (GMAW) activities, for the Trolley Test Stand. The QA Inspector observed that Mr. Rodriguez was utilizing a Miller brand machine/wire feeder, to perform the FCAW and that Hobart® Fabcore 86R (.045") diameter wire was being utilized, for the filler metal. The QA Inspector observed that Mr. Rodriguez was performing the GMAW in the 1G (flat) position. The QA Inspector observed that the Welding Procedure Specification (WPS) being utilized by Mr. Rodriguez appeared to be approved procedure # W102 and the fit up preparation appeared to be a Complete Joint Penetration (CJP), 45 degree double bevel. The QA Inspector observed that the GMAW was being performed on the piece mark identified as Rail Y flange, per the shop drawing # WMI-TTC-4. The QA Inspector observed production fitter Larry Swanson assisting Mr. Rodriguez, prior to and during the GMAW process on the Rail Y flanges.

E2/E3-EB Traveler

Elevated Truss Section

On this date, the QA Inspector observed Westmont Industries (WMI), production welder Raymundo Anaya and production fitter, Cesar Canales continuing to perform activities for the fabrication of the Travelers. The QA Inspector observed Mr. Anaya and Mr. Canales utilize the overhead bay crane, chain and hook to lift up the completed frame assemblies identified as A235, B235, A214 and A216. Once these frame assemblies were lifted, the QA Inspector observed that the assemblies were placed nearby the area which the assemblies will be fit and welded. The QA Inspector then observed Mr. Anaya and Mr. Canales utilize the overhead bay crane, chain and hook to lift up the completed frame assembly, identified as A235 and place the frame on one of the temporary Wide Flange Beams (WFB's) which had been previously placed, for the purpose of fabricating the Travelers. After the Frame assembly was secured, the QA Inspector then observed Frame Assembly B235 being lifted and placed on the second WFB, which had been previously placed for the fabrication of the Travelers. After this frame assembly was secure, the QA Inspector then observed Frame assembly identified as A214 and A216, being lifted and placed, in the same manner, between frame assembly A235 and B235, in a perpendicular fashion. The QA Inspector then observed Mr. Anaya and Mr. Canales reference the shop drawings and verify dimensions, utilizing a tape measure and framing squares to insure correct placement, of these four Traveler Frame assemblies. After observing Mr. Anaya and Mr. Canales verifying dimensions, the QA Inspector then observed numerous C-Clamps placed and temporary angle iron being tack welded between the frames. The QA Inspector spoke with Mr. Anaya and he explained that the C-Clamps and angle were placed to secure the four frames together. Near the end of the shift, the QA Inspector observed that FCAW tack welding had started on these fit-up and placed frame assemblies. See attached picture below.

On this date, the QA Inspector observed Westmont Industries (WMI), production welder Eutimo Lopez (WID # 3035), continuing to perform Flux Core Arc Welding (FCAW) activities for the E2/E3-EB Traveler frames. The QA Inspector observed Mr. Lopez performing the FCAW on previously fit and tack welded Tube Steel (TS) on the Frame Assembly, identified as B237, per the shop drawings. The QA Inspector observed that Mr. Lopez was utilizing a Miller brand machine and wire feeder, to perform the FCAW and that Ultracore 71A85 (.045") diameter

wire was being utilized, for the filler metal.

The QA Inspector observed that the above mentioned welders appeared to utilize spray cans of “Anti Spatter”, prior to commencing the welding activities and this appeared to reduce the amount of weld spatter on or near the weld joints, after completion. The QA Inspector observed that Smith-Emery QC Inspector Ruben Dominguez was present, during the above mentioned welding and tacking activities and QC Inspector Dominguez explained that approved Welding Procedure Specifications (WPS’s) were being utilized. The QA Inspector randomly observed that the applicable WPS’s and copies of the shop drawings, were located near each work station, where the above mentioned FCAW and fitting activities were being performed. QC Inspector Dominguez explained that the in-process welding parameters were randomly verified including voltage, amperage, pre-heat and travel speed and explained that the parameters appeared to be in compliance to the applicable WPS. The QA Inspector randomly verified these parameters and concurred with QC Inspector Dominguez.

Summary of Conversations:

As noted above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy (510) 385-5910, who represents the Office of Structural Materials for your project.

Inspected By:	Vance,Sean	Quality Assurance Inspector
Reviewed By:	Edmondson,Fred	QA Reviewer